

ABSTRACT OF THE DISCLOSURE

A method is provided which includes planarizing structures and/or layers such that step heights of reduced and more uniform thicknesses may be formed. In particular, 5 a method is provided which includes polishing an upper layer of a topography to expose a first underlying layer and etching away remaining portions of the first underlying layer to expose a second underlying layer. The topography may then be subsequently planarized. As such, a method for fabricating shallow trench isolation regions may include forming one or more trenches extending through a stack arranged over a semiconductor substrate. 10 Such a method may further include blanket depositing a dielectric over the trenches and the stack of layers such that the trenches are filled by the dielectric. The dielectric may then be planarized such that upper surfaces of the dielectric remaining within the trenches are coplanar with an upper surface of an adjacent layer of the stack.

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